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**Search Results - Record(s) 1 through 2 of 2 returned.**☐ 1. Document ID: JP 61293214 A

L3: Entry 1 of 2

File: JPAB

Dec 24, 1986

PUB-NO: JP361293214A

DOCUMENT-IDENTIFIER: JP 61293214 A

TITLE: POLYMERIC ELASTOMER MOLDING AND ITS USE

PUBN-DATE: December 24, 1986

## INVENTOR-INFORMATION:

NAME

COUNTRY

KOBAYASHI, KAZUYUKI

HAYASHI, SHUNICHI

SHIBUTA, RYUICHI

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

MITSUBISHI HEAVY IND LTD

M D KASEI KK

APPL-NO: JP60134338

APPL-DATE: June 21, 1985

US-CL-CURRENT: 528/45

INT-CL (IPC): C08G 18/08; C08G 18/00; C08J 3/00

## ABSTRACT:

PURPOSE: To utilize marked changes in the properties of a polymeric elastomer around its glass transition point with advantage, by deforming a polymeric elastomer molding at a specified temperature, setting it by cooling and restoring its initial shape by heating prior to its use.

CONSTITUTION: An isocyanate component such as isophorone diisocyanate is reacted with a polyol component such as a polyoxyalkylene polyol in the presence of a chain extender, a crosslinking agent and, optionally, a catalyst to obtain a polymeric elastomer such as a polyurethane elastomer which has a glass transition temperature (T<sub>g</sub>) near the desired set temperature and a modulus of elasticity which changes greatly around the T<sub>g</sub>. This elastomer is molded into a molding having a practical shape (e.g., work holding material) 3, which is then deformed into, for example, an easily portable and storable shape 3' by deformation at a temperature of from the T<sub>g</sub> to the molding temperature, and is cooled to a temperature ≤ T<sub>g</sub>; its T<sub>g</sub> to set its deformation. Prior to its use, it is heated to a temperature of from the T<sub>g</sub> to its molding temperature to restore its initial shape 3.

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 2. Document ID: JP 61293214 A JP 94096629 B2

L3: Entry 2 of 2

File: DWPI

Dec 24, 1986

DERWENT-ACC-NO: 1987-038914  
DERWENT-WEEK: 198706  
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TITLE: High molecular elastomer mouldings - have glass transition at controlled by  
amts. of isocyanate, poly:ol and chain extender added

PRIORITY-DATA: 1985JP-0134338 (June 21, 1985), 1989JP-0041805 (June 20, 1985)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 61293214 A	December 24, 1986		007	
JP 94096629 B2	November 30, 1994		006	C08G018/08

INT-CL (IPC): C08G 18/08; C08J 3/00

ABSTRACTED-PUB-NO: JP61293214A  
BASIC-ABSTRACT:

Use of high molecular elastomer mouldings comprises transforming the mouldings at glass transition temp. (Tg) moulding temp. of the elastomer, cooling the transformed mouldings to Tg or less to keep the transformation and heating the transformed mouldings to Tg - the moulding temp. to restore the mouldings to its original form at the time of use.

High molecular elastomer moulding is produced from isocyanate, polyol and chain-extending agent so that Tg of the elastomer comes at about normal temp..

USE/ADVANTAGE - The object is to control Tg of high molecular elastomer to desired temp. by changing kind of isocyanate, polyol or chain-extending agent or rate of the raw materials compounded and to use the elastomer by utilising change of the properties at about Tg.

In an example, isophorone diisocyanate and polyol 'BPE-100' (by SANN) were compounded so that molar ratio of NCO/OH became 0.82 and reacted to produce prepolymer. To the prepolymer, TDI adduct of trimethylolpropane was compounded so that molar of the adduct/the prepolymer became 12. The mixt. was reacted under vacuum as stirring, poured into a mould and cured at 80 deg.C for a day to obtain polyurethane elastomer mouldings (a) (Tg = 50 deg.C). The mouldings (a) was digested in warm water of 50 deg.C and transformed into the form to cover the arm. The mouldings was left as it was at room temp. (35 deg.C or less) to fix it tightly. The mouldings were heated to at least Tg by a hair dryer to restore to the original form.

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L4: Entry 1 of 2

File: EPAB

Jan 8, 1987

PUB-NO: DE003523771A1

DOCUMENT-IDENTIFIER: DE 3523771 A1

TITLE: Process and injection-moulding machine for producing heat-shrinkable tubes from thermoplastic

PUBN-DATE: January 8, 1987

## INVENTOR-INFORMATION:

NAME

COUNTRY

STEWING, ALBERT

DE

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

STEWING ALBERT

APPL-NO: DE03523771

APPL-DATE: July 3, 1985

PRIORITY-DATA: DE03523771A (July 3, 1985)

US-CL-CURRENT: 264/291

INT-CL (IPC): B29C 69/00

EUR-CL (EPC): B29C061/06; B29C045/00

## ABSTRACT:

The invention relates to a process for producing heat-shrinkable tubes for joint shrink sleeves and junction shrink sleeves in telecommunications, according to which process the heat-shrinkable tubes are injection-moulded as individual parts and cross-linked while still in the injection mould and then the individual parts are stretched to the predetermined tube size during cooling but still utilising the injection-moulding heat. This takes place dispensing with an otherwise separate

extruding and stretching zone. Efficient tube production is thus achieved.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 2. Document ID: DE 3523771 A DE 3523771 C2

L4: Entry 2 of 2

File: DWPI

Jan 8, 1987

DERWENT-ACC-NO: 1987-008347

DERWENT-WEEK: 198702

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TITLE: Heat-shrink thermoplastic sleeves - produced by individually injection moulding crosslinking in mould and stretching while cooling down

INVENTOR: STEWING, A

PRIORITY-DATA: 1985DE-3523771 (July 3, 1985)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>DE 3523771 A</u>	January 8, 1987		005	
<u>DE 3523771 C2</u>	May 19, 1993		006	B29C069/00

INT-CL (IPC): B29C 61/06; B29C 69/00

ABSTRACTED-PUB-NO: DE 3523771A

BASIC-ABSTRACT:

Heat-shrink sleeves of thermoplastics, for sleeving connections and branches in cables (and partic. telephone cables), are produced whereby the polymer is cross-linked, stretched, and coated with adhesive and colouring. The sleeves are individually injection moulded and are crosslinked while still in the mould; they are then stretched to the required deg. while cooling but still utilising their moulding heat.

ADVANTAGE - Process is rational and economical and hence produces the sleeves at low cost.

ABSTRACTED-PUB-NO:

DE 3523771C EQUIVALENT-ABSTRACTS:

Heat-shrink sleeves of thermoplastics, for sleeving connections and branches in cables (and partic. telephone cables), are produced whereby the polymer is cross-linked, stretched, and coated with adhesive and colouring. The sleeves are individually injection moulded and are crosslinked while still in the mould; they are then stretched to the required deg. while cooling but still utilising their moulding heat.

ADVANTAGE - Process is rational and economical and hence produces the sleeves at low cost.

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**Search Results - Record(s) 1 through 2 of 2 returned.**☐ 1. Document ID: DE 3142850 A1

L5: Entry 1 of 2

File: EPAB

May 11, 1983

PUB-NO: DE003142850A1

DOCUMENT-IDENTIFIER: DE 3142850 A1

TITLE: Hot-melt adhesive article

PUBN-DATE: May 11, 1983

## INVENTOR-INFORMATION:

NAME

COUNTRY

MASLER, GERHARD

DE

WIBROW, GUENTHER

DE

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

ITW ATECO GMBH

DE

APPL-NO: DE03142850

APPL-DATE: October 29, 1981

PRIORITY-DATA: DE03142850A (October 29, 1981)

US-CL-CURRENT: 524/539

INT-CL (IPC): C09K 3/10; C09J 7/02; C09J 3/16

EUR-CL (EPC): C09K003/12; B62D025/24, C09J167/02 , C09J167/02

## ABSTRACT:

Hot-melt adhesive article made of plastic, characterised by a mixture of a) 5-10% by weight of thermoplastic elastomer having a heat deflection temperature of 240 DEG C, b) 65-80% by weight of thermoplastic elastomer having a heat deflection temperature

of 160 DEG C and c) 15-30% by weight of carbon black.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 2. Document ID: DE 3142850 A DE 3142850 C

L5: Entry 2 of 2

File: DWPI

May 11, 1983

DERWENT-ACC-NO: 1983-46953K

DERWENT-WEEK: 198320

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TITLE: Melt adhesive compsn. pref. of two polyester elastomers - with different m.pt. and carbon black

INVENTOR: MASLER, G; WILBROW, G

PRIORITY-DATA: 1981DE-3142850 (October 29, 1981)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>DE 3142850 A</u>	May 11, 1983		010	
<u>DE 3142850 C</u>	October 18, 1990		000	

INT-CL (IPC): C08J 5/00; C09J 3/16; C09J 5/06; C09J 7/02; C09J 121/00; C09J 167/00; C09K 3/10

ABSTRACTED-PUB-NO: DE 3142850A

## BASIC-ABSTRACT:

Melt adhesive plastics compsn. comprises (a) 5-10 wt.% thermoplastic elastomer (I) stable up to 240 deg.C; (b) 65-80 wt.% thermoplastic elastomer (II) stable up to 160 deg.C and (c) 15-30 wt.% carbon black. Pref. the elastomers are polyesters.

The formulation of the compsn. depends on the intended temp. of use, e.g. for higher temp. applications the proportions of (II) and carbon are increased. The carbon can be any pigment or filler grade of material.

The compsn. is used to plug holes, e.g. paint out-flow holes in car bodies. When heated (e.g. during the lacquer storing stage) component (II) melts, providing good adhesion between the plug and the workpiece. Component (I) does not melt so the shape of the plug is maintained.

ABSTRACTED-PUB-NO:

DE 3142850C EQUIVALENT-ABSTRACTS:

Melt adhesive plastics compsn. comprises (a) 5-10 wt.% thermoplastic elastomer (I) stable up to 240 deg.C; (b) 65-80 wt.% thermoplastic elastomer (II) stable up to 160 deg.C and (c) 15-30 wt.% carbon black. Pref. the elastomers are polyesters.

The formulation of the compsn. depends on the intended temp. of use, e.g. for higher temp. applications the proportions of (II) and carbon are increased. The carbon can be any pigment or filler grade of material.

The compsn. is used to plug holes, e.g. paint out-flow holes in car bodies. When heated (e.g. during the lacquer storing stage) component (II) melts, providing good adhesion between the plug and the workpiece. Component (I) does not melt so the shape of the plug is maintained. (10pp)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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**Search Results - Record(s) 1 through 2 of 2 returned.**☐ 1. Document ID: JP 04170426 A

L2: Entry 1 of 2

File: JPAB

Jun 18, 1992

PUB-NO: JP404170426A

DOCUMENT-IDENTIFIER: JP 04170426 A

TITLE: POLYETHERESTER HAVING SHAPE MEMORY CAPABILITY

PUBN-DATE: June 18, 1992

## INVENTOR-INFORMATION:

NAME

COUNTRY

OSAWA, TSUNEYUKI

MATSUMOTO, TETSUO

TSUJIMOTO, KEIZO

ABE, TOSHIKAZU

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

NIPPON ESTER CO LTD

APPL-NO: JP02296847

APPL-DATE: November 1, 1990

INT-CL (IPC): C08G 63/676; C08F 299/04

## ABSTRACT:

PURPOSE: To improve shape memory capability by copolymerizing an arom. dicarboxylic acid, an unsatd. aliph. dicarboxylic acid, a satd. diol, and a polyalkylene glycol.

CONSTITUTION: An arom. dicarboxylic acid (e.g. terephthalic acid), a satd. diol (e.g. ethylene glycol), and a polyalkylene glycol having a mol.wt. of 400-6,000 (e.g. polyethylene glycol) are subjected to esterification in a nitrogen atmosphere of 0.5-5.0kg/cm<sup>2</sup> pressure at 190-300°C for 1-4hr, then esterification with an unsatd. aliph. dicarboxylic acid (e.g. maleic anhydride) at 160-270°C for 1-4hr, and finally polycondensation under a reduced pressure of 1Torr or lower at 180-270°C for 0.5-5hr, giving a polyetherester having shape memory capability, comprising structural units of formulas I to V (wherein R1 is an arom. group; R2 is an unsatd. aliph. group; G1 is a satd. aliph. group; G2 is an unsatd. aliph. group; A is an alkylene group; and n is a number which gives formula V a mol.wt. of 400-6,000) (the molar amt. of the sum of units of formulas I and II being equal to that of the sum of units of formulas III, IV, and V, the molar ratio of the sum of units of formulas II and IV to the sum of units of formulas I and II being 0.01-10%, and the amt. of units of formula V being 10-50wt.% of the total units), and having a glass transition point of 10-80°C, an m.p. of 100°C or higher, and an intrinsic viscosity of 0.3 or higher.

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☐ 2. Document ID: JP 2862989 B2 JP 04170426 A

L2: Entry 2 of 2

File: DWPI

Mar 3, 1999

DERWENT-ACC-NO: 1992-254019

DERWENT-WEEK: 199914

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TITLE: Shape-memory polyether ester! for pipe, wire, etc. - has defined physical properties and comprises copolymer of 5 specific structural units

PRIORITY-DATA: 1990JP-0296847 (November 1, 1990)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2862989 B2	March 3, 1999		006	C08G063/676
<u>JP 04170426 A</u>	June 18, 1992		007	C08G063/676

INT-CL (IPC): C08F 299/04; C08G 63/676

ABSTRACTED-PUB-NO: JP04170426A

## BASIC-ABSTRACT:

Polyether ester has Tg 10-80 deg.C, m.pt. 100 deg.C or higher and limited viscosity 0.3 or more, comprising main unit of (1) -OC-R1-CO-; (2) -OC-R2-CO-; (3) -O-G1-O-; (4) -O-G2-O-; (5) -O-(AO)n-. (a) total of unit (1) and (2) is equal mol. of unit (3), (4) and (5); (b) total of unit of (2) and (4) is 0.01-10 mol.% of total of (1) and (2) (at least one of unit (2) and (4) can be 0); and (c) unit (5) is 10-50 wt.%. (R1 = aromatic gp.; R2 = unsatd. aliphatic gp.; G1 = satd. aliphatic gp.; G2 = unsatd. aliphatic gp.; A = alkylene; n = no. for formation of 400-6000 of MW of unit (5)).

Pref. unit (1) is terephthalic acid residue; (2) is maleic acid or itaconic acid residue; (3) is ethylene glycol residue; (4) is 2-butene-1,4-diol residue; and (5) is polyethylene glycol or polytetramethylene glycol residue.

USE/ADVANTAGE - Polyether ester with shape-memory ability is useful for film, pipe or wire.

In an example, polytetramethylene glycol (7.4 kg), ethylene glycol (2.5 kg), and tetrabutyl titanate (16g) are added in bis(beta-hydro xy ethyl terephthalate) and its oligomer (29.9kg) prepd. from terephthalic acid and ethylene glycol and reacted at 250 deg.C for 1 hr. for esterification. Maleic anhydride (44g) is added and reacted at 250 deg.C for 0.5 hr. for esterification to obtain reaction prod. The prod. is polymerised at 260 deg.C in 0.4 Torr for 3 hrs. to form polyetherester. Tg is 46 deg.C and m.pt. is 247 deg.C; and (eta) is 0.

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